# Fiscal Year 2010 Supplemental Financial Assistance Application Form and Resource Guide

for

Washington State Water Pollution Control
Revolving Fund (Revolving Fund) Loan Program
and
Funds Designated for Economic Stimulus through the American
Recovery and Reinvestment Act of 2009

This FY 2010 Supplemental Financial Assistance Application Form can be found at:

 $\underline{http://www.ecy.wa.gov/programs/wq/funding/FedStimFundsSRF.html}$ 

If you need this document in an alternate format, please contact us at 360-407-6502. Persons with hearing loss can call 711 for Washington Relay Service. Persons with a speech disability can call 877-833-6341.

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This section provides information about resources that may help you prepare a successful application, including a scoring guideline that outlines how evaluators will assign points. The application follows this resource section.

Ecology cannot guarantee website accuracy or continued maintenance. Ecology does not endorse non-Ecology websites.

Application materials:

http://www.ecy.wa.gov/programs/wq/funding/FedStimFundsSRF.html

Information on basin location of salmonid stocks (listed as threatened or endangered):

http://www.nwr.noaa.gov

Longitude and latitude of your project:

http://apps.ecy.wa.gov/wqawa/viewer.htm

Conversion from degrees, minutes, and seconds to decimal degrees:

http://www.directionsmag.com/latlong.asp

Information on problem areas, affected designated uses, or water quality programs addressed or implemented (Washington's Water Quality Management Plan to Control Nonpoint Source Pollution, Volume 1):

http://www.ecy.wa.gov/programs/wq/nonpoint/nps\_plan.html

The Environmental Protection Agency's (EPA) Watershed Planning Handbook to locate the <u>required</u> nine key criteria for nonpoint planning and implementation projects (see Chapter 2, page 16):

http://www.epa.gov/owow/nps/watershed\_handbook/

The Water Quality Assessment interactive map for 303(d)-listed waters:

http://apps.ecy.wa.gov/wqawa/viewer.htm

TMDL Lead contact information:

http://www.ecy.wa.gov/programs/wq/tmdl/contacts.html

Financial Hardship Evaluation Form (required for hardship determinations):

http://www.ecy.wa.gov/programs/wq/funding/2010/FinancialHardshipForm-FY2010.pdf

## **Contacts for Questions**

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Internet:	Water Quality Program:		
	http://www.ecy.wa.gov/programs/wq/wqhome.html		
	Funding Information:		
	http://www.ecy.wa.gov/programs/wq/funding/funding.html		
Ecology, Water Quality Program	<b>Headquarters – Lacey</b> (360) 407- 6400		
Reception:	Central Regional Office (CRO) – Yakima (509) 575-2490*		
	Eastern Regional Office (ERO) – Spokane (509) 329-3400*		
	Northwest Regional Office (NWRO) – Bellevue (425) 649-7000*		
	Southwest Regional Office (SWRO) – Lacey (360) 407-6300*		
	(*Number is the spill /environmental emergency line after hours)		
General Information:	Jeff Nejedly (360) 407-6566, e-mail <u>jnej461@ecy.wa.gov</u>		
Facility Projects:	Brian Howard (360) 407-6510, e-mail <u>brho461@ecy.wa.gov</u>		
Activity Projects:	Alice Rubin (360) 407-6429, e-mail <u>arub461@ecy.wa.gov</u>		
Application Packets:	Section Secretary (360) 407-6502		
U.S. Mail Address: (Not to be used	Department of Ecology, Water Quality Program Financial		
for UPS or other package delivery	Management Section, P.O. Box 47600 Olympia, WA 98504-7600		
services)			
Street Address: (Physical location/	Department of Ecology, Water Quality Program Financial		
package delivery – not to be used for	Management Section, 300 Desmond Drive, Lacey, WA 98503		
U.S. Mail)	, ,,		

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#### **ECOLOGY EVALUATOR SCORING GUIDELINES (for use with Part 2)**

#### DO NOT FILL IN

Ecology's project evaluators will use the following criteria to score project proposals. The questions in the scoring guidelines are taken from Part 2 of the application. Each question is followed by a table outlining scoring criteria that should help guide the applicant in developing answers to the questions.

Executive Summary – In 250 words or less, describe the project and its water quality benefits.

#### 1. Scope of Work (Up to 250 pts.)

Points are awarded for a clear, complete, and well thought-out scope that directly addresses a water quality problem. The scope demonstrates an understanding of the work required to implement and complete the project. Resourceful approaches or solutions are encouraged.

- Provide a detailed scope of work to achieve the water quality benefits of the project that includes clearly defined tasks, deliverables, and cost per task.
- Describe the project area and provide supporting map(s) and any relevant diagrams and pictures.

1.	Scope of Work	Total 250
		Points
	Complete and concise description of the project tasks and outcomes. Clear detailed description of deliverables, timelines, and purpose.	Up to 100 pts.
	Project directly and measurably addresses a water quality problem.	Up to 150 pts.

#### **2.** Proposed Budget (Up to 150 pts.)

Budget: Points are awarded for a complete, reasonable budget that is consistent with the tasks described in the scope of work.

• Provide a clearly defined Task- and Object-oriented budget (as applicable).

Cost Estimate Process: Points are awarded to cost effective projects with accurate cost estimates. For example, an applicant may determine cost effectiveness and estimate accuracy based on experience with past or on-going projects, through consultation with other entities that have related experience, or through a planning process such as value analysis.

- Describe how costs were estimated. Include the steps taken to ensure accuracy, such as experience with past or ongoing projects, or through consultation with other entities that have related experience.
- Describe the process used to control cost and ensure that this is a cost-effective project (e.g., value engineering for facilities projects or cost analysis for activities projects).

2.	Proposed Budget	Total 150
		Points
	Complete project budget is consistent with the scope of	
work.		
	The cost estimate process is reasonable.	Up to 30 pts
	The project budget represents a good value for the work	
	and water quality benefit achieved.	Up to 100 pts

## **3.** Water Quality and Public Health Improvements (Up to 250 pts.)

Points are awarded for improvements and protection of water quality and public health. Substantial environmental improvements receive the most points. Measurable improvements receive more points than unclear or vague benefits. The actual benefit, total impact (area impacted, number of people affected), level of implementation, and the severity of the problem will be considered. Only changes that can be achieved by the proposed scope of work will be considered.

- Define the water quality and public health problems the project will address.
- Describe the expected project results, including how the project will help achieve water quality and public health improvements and protection. Describe how much of the problem will be addressed by the project.
- Describe how success of the project will be measured and documented.
- Describe how the water quality and public health improvements will be sustained for the long-term.

3.	3. Water Quality and Public Health Improvements	
		Points
	How severe is the water quality problem and how well is it	Up to 50 pts
	defined.	
	Project will achieve substantial water quality benefits.	
Project success can be measured, and proposed methods to		
	measure success are reasonable.	
	The project provides long-term sustainability of water	
	quality benefits (e.g., operation and maintenance of the	Up to 50 pts
system, long-term on-site septic program follow-up, and		
watershed management).		

## **4.** State and Federal Requirements (Up to 100 pts.)

Points are awarded for projects that address state and federal requirements (e.g. Total Maximum Daily Load (TMDL), permit requirements, watershed plans, etc.). How well the project addresses TMDL objectives will be considered. Straight to implementation proposals will be awarded points based on the link between the activity proposed and the ability to meet water quality standards.

• Describe how this project is specifically required by a state or federal agency. Provide reference or documentation including permit conditions, department orders, court orders, or other department correspondence.

- Explain how this project addresses specific actions in an Ecology-authored Water Quality Improvement Report or Water Quality Implementation Plan. Provide the document publication number and the last date of contact with the respective Ecology TMDL lead.
- Explain how this project addresses specific actions in a program or a plan, other than a TMDL, that is designed to meet water quality standards.

4.	State and Federal Requirements	Total 100
		Points
	How well does this facilities project address a current permit requirement or other legal requirement?	
	Or	Up to 100 pts
	How well does this activities implementation project address required actions of a Water Quality Improvement Report, other current approved plan, or a program specifically designed to address water quality problems?	

## 5. Project Team (Up to 50 pts.)

Points are awarded based on skills, qualifications, and experience of the established or potential project team members.

- Describe roles and responsibilities of each team member. Include the estimated amount of time each team member will devote to the project. (e.g., what percentage of each team member's work week will be devoted to this project?)
- Describe the relevant skills and qualifications of each team member (do not submit resumes).

5.	Project Team	Total 50
		Points
	Team members' roles and responsibilities are well defined	Up to 30 pts
	and an estimated percentage of time each team member will	
	devote to this project is adequate for the scope of work.	
	Team members' past experience is relevant.	Up to 20 pts

## **6.** Project Development and Local Support (Up to 100 pts.)

Points are awarded based on project development efforts and commitments from project partners. Provide documentation as appropriate.

- Describe the decision making process used to select this project.
- Describe how you have involved and fostered local, regional, and statewide partnerships for the success of the project.
- Describe how you will sustain long-term water quality efforts.
- For cities, towns and counties, indicate whether you are designated an "evergreen community" per RCW 35.105.030.

6.	Project Development and Local Support	Total 100
	A comprehensive decision making process was used to	
	arrive at the proposed project.	
	The level of local support and commitments for the project	Up to 50 pts
	is documented (e.g., on-going strategic review of sewer	
	user rates, on-going watershed planning, interlocal	
	cooperation, and ordinance development).	

#### **7.** Readiness to Proceed (Up to 50 pts.)

Points are awarded based on how soon a project can begin.

- Describe the steps you have taken to proceed immediately with the project.
- Provide detailed information and documentation on project elements such as completed designs, permits, inter-local agreements, landowner agreements, easements, other secured funding, staff, Quality Assurance Project Plans, and other agency approvals.

7.	Readiness to Proceed	Total 50
		Points
	Project elements are in place for the project to proceed and	Up to 50 pts
	documentation is provided.	

## **8.** Ratepayer Impact (50 pts.)

Points are awarded to projects that potentially place financial hardship on sewer ratepayers without the requested financial assistance. Applicants claiming financial hardship must fill out the financial hardship evaluation form and submit it with the application. Points will be assigned based on the outcome of the hardship calculations done at Ecology Headquarters as guided through rule.

Ī	8.	Ratepayer Impact	Total 50
			Points

Note: Ties of overall total points in the evaluation of the project are broken using the score to Question 3 - Water Quality and Public Health Improvements. For example in a tie between two projects, the project that scores higher in Question 3 is placed above the other on the priority list. The score from Question 7 - Readiness to Proceed, is used if the tie cannot be broken using Question 3.

#### END OF APPLICATION RESOURCES

## FY 2010 Supplemental Water Quality Financial Assistance Application



# Fiscal Year 2010 Supplemental Financial Assistance Application

Centennial Clean Water Program (Centennial)
Federal Clean Water Act Section 319
Nonpoint Source Fund (Section 319)
Washington State Water Pollution Control
Revolving Fund (Revolving Fund)

ECOLOGY USE	
Application no.	

1.	PROJECT TITLE: Ballard Green Streets					
2.	2. APPLICANT NAME: (Public body or private not-for-profit per IRS 501 (C) (3)) Seattle Public Utilities		3.	FEDERAL ID 91-6001275	NO:	
4.	APPLICANT SIGNATOR	RY: (The person whose name is listed	d here must	sign	Box 13 of this appli	cation)
	Name: Ray Hoffman					
	Title: Acting Director		Telephone	Nun	nber: (206) 684-585	52
	Address: Seattle Public Utilities	s, PO Box 34018 Seattle WA 98124-40	)18			
5.	5. APPLICANT STAFF CONTACT:					
	Name: Tracy Tackett			ı		
	Title: LID Program Manager	Telephone Number: 206-386-00	)52		E-Mail Address tracy.tackett@se	-
	Address: Seattle Public Utilities,	PO Box 34018 Seattle WA 98124-40	18			
6.	PROJECT INFORMATI	ON:				
	What is the population in the PR	OJECT area? 10,800				
	Is the PROJECT located in a basendangered in accordance with t	sin with salmonid stocks listed as threathe Endangered Species Act?	tened or		X Yes	□No
	Is the PROJECT statewide?				Yes	⊠ No
	If <b>NO</b> , list below the county(ies), Water Resource Inventory Area designation(s), Legislative district(s), and Congressional district(s) where at least five percent of the PROJECT will be accomplished.					

Please Note: You must select a primary location and then provide additional location information as applicable. All separate designations (County, Legislative District, Congressional District, and WRIA) must equal 100 percent (list from greatest to least percentage, and <u>please break any ties by at least one percentage point</u>). Limit your separate Legislative Districts and Congressional Districts to those that cover greater than five percent of the project area.

County(ies) for the Project:		
Name	Percent	
Primary		
King	100	
Total	100	

WRIA(s) for the project:	
Water Resource Inventory Area	Percent
Primary	
8	100
Total	100

HUC Code for the Project: http://water.usgs.gov/wsc/map_index.html	
Hydrologic Unit Code	Percent
Primary	
17110012	100
Total	100

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1120108	- I I			same rapparettion	
Congressional District(s) for the Project:		Legislative District(s) for	Legislative District(s) for the Project:  Stream Reach Co (14-digit number depicting t for the project)  http://nhd.usgs.gov/ind-		_
Number	Percent	Name	Percent	Segment and Reach (NHD)	Percent
Primary		Primary		Primary	
7	100	36	100	17110012000023	100
Total	100	Total	100	Total	100

Provide GPS coordinates representative of your project location and the water body affected. The project location is the approximate center of where you will be working. The water body location should be located in the water body affected by the project, or the project location for ground water projects. Facilities projects should report the outfall location or center of the land application site.

Location	Latitude/Longitude	Primary Site	Secondary Site	Tertiary Site
Project Location	Latitude: (e.g., 45.3530)	47.6902	47.6902	47.6755
	Longitude: (e.g., -120.4510)	-122.398	-122.3852	-122.3983

7.	PROJECT DURATION:
	Estimated Start Date: March 2009
	Project Length: 36 months (10 months construction, 12 months vegetation establishment, 6 months communication)
	Anticipated Project Completion Date: May 2012
	For Water Pollution Control Facility Construction projects, indicate the anticipated Initiation of Operation Date:

	<b>Note</b> : Projects must be completed within five years of issuance of the Final Offer and Applicant List date.		
8.	WATER BODY AND NEEDS ADDRESSED BY PROJECT: For all projects:		
	Is the affected water body listed on the Clean Water Act Section 303(d) List as impaired? Yes 🗵 No 🗌		
	If yes, what is the 303(d)-Listing parameter(s) and associated identification number(s)?  Ship Canal  1-TP (W): 52856  1- Pb (W): 8066  1- Aldrin (W): 11918  1- FC (W): 12172		
	Check all type(s) of water bodies that the proposal targets:		
	<ul> <li>□ Freshwater rivers</li> <li>□ Freshwater lakes</li> <li>□ Freshwater lakes</li> <li>□ Freshwater wetlands</li> <li>□ Ground water</li> <li>□ Direct marine water</li> <li>□ Saltwater estuary</li> <li>□ Other (specify) Lake Washington Ship Canal, a freshwater channel and migration corridor</li> </ul>		
	Check all that this project will address:		
	<ul> <li>□ Endangered salmonids</li> <li>□ Other Endangered Species Act protected species (identify)</li> <li>□ Protection of shellfish habitat</li> <li>□ Protection of domestic water supply</li> <li>□ TMDL requirements</li> </ul>		

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	<ul><li>NPDES requirements</li><li>☐ Other (specify)</li></ul>		
9.	FOR WATER POLLUTION CONTROL <u>ACTIVITY</u> PROJECTS ONLY:		
		ity activity projects must meet the objectives of the Washington's Water Quality Sources of Pollution (Vol. 3) ( <a href="http://www.ecy.wa.gov/pubs/0510027.pdf">http://www.ecy.wa.gov/pubs/0510027.pdf</a> ).	
	Type of Activity Project		
	Check all that this project would include:  Agricultural best management practices  Stormwater best management practices  Other best management practices (specify):  Water quality monitoring  Riparian restoration  Large woody debris placement  Bank stabilization  Public education and outreach  On-site septic system planning/surveys  Groundwater protection and/or planning  PILOT/demonstration project  Comprehensive planning (such as watershed management plans or stormwater management plans)  Other (specify):		
	Watershed Plan Criteria  NOTE: Review the information on EPA's 9 Key Elements for non-point source projects. Please refer to EPA's Watershed Planning Handbook to evaluate if the plan being implemented meets these criteria.  Is this activity project primarily planning or implementation?  Planning □ Yes □ No Implementation □ Yes □ No		
	If applying for an implementation project, p	please fill out the table below.	
	Implementation Action	Reference the plan that describes this action, including page numbers and where a copy of the plan can be obtained for review.	
	Implement watershed plan	Seattle Public Utilities, 2010 CSO Plan Update (Final Draft December 2009) Chapters 5, 6 and 7. Internal draft only, portions available by request to Tracy Tackett, staff contact. Seattle Public Utilities, 2004 Proposed Comprehensive Drainage Plan, Chapter 5, Stormwater Control, Section 5: Natural Drainage System Design: An Integrated Approach to Flow Control, pages 5-11 to 5-13; Chapter 7, Aquatic Resource Protection, pages 7-1 to 7-14 (http://www.seattle.gov/util/About_SPU/Drainage_&_Sewer_System/Plans/C omprehensive_Drainage_Plan/index.asp)	
	Evaluate progress	Chapter 7, Aquatic Resource Protection, Aquatic Resource Conditions Assessment, pages 7-14 to 7-33; Section 7.5 Water Quality Program, pages 7-33 to 7-49 (http://www.seattle.gov/util/About_SPU/Drainage_&_Sewer_System/Plans/C omprehensive_Drainage_Plan/index.asp)	
	Share results & engage others	Seattle Public Utilities, 2004 Proposed Comprehensive Drainage Plan, Chapter 5, Stormwater Control; Chapter 7, Aquatic Resource Protection, pages 7-8 to 7-12 (http://www.seattle.gov/util/About_SPU/Drainage_&_Sewer_System/Plans/Comprehensive_Drainage_Plan/index.asp)	

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Will the proposed project directly result in a load reduction of Nitrogen, Phosphorus, and/or Sediment?	☑ Yes ☐ No
Check applicable boxes below. <b>NOTE:</b> The recipient of financial assistance will be responsible for reporting the annual load reduction results.	
<ul> <li>□ Dissolved oxygen</li> <li>□ Nitrogen</li> <li>□ Phosphorus</li> <li>□ Sediment</li> <li>□ Fecal coliform</li> <li>□ Temperature</li> <li>□ Others (specify):</li> </ul>	
10. FOR WATER POLLUTION CONTROL <u>FACILITY</u> PROJECTS ONLY:	
GROWTH MANAGEMENT ACT (GMA) COMPLIANCE:  Are you GMA compliant? Yes \( \subseteq \) No \( \subseteq \)  If not, when do you expect to be in compliance?  Do you expect to be in compliance for the duration of the project? Yes \( \subseteq \) No \( \subseteq \)	
Type of Facility Project	
Check all that this project involves:	
Wastewater treatment systems needs Water reclamation and reuse Stormwater pollutant control needs On-site septic system repair/replacement program Combined sewer overflow correction Other (specify):	

# Part 1 FY 2010 Supplemental Water Quality Financial Assistance Application

For wastewater and stormwater treatment facilities projects, check only **one** of the six boxes below that represents the present proposal, and complete **all** prerequisite planning dates and include attachments noted.

and complete <u>an</u> prerequisite planning dates and include	e attachments noted.	
Proposal to obtain financial assistance for:	Prerequisite:	
<ul> <li>Combined comprehensive, general sewer, or stormwater plan with a facilities plan (Not eligible for supplemental application)</li> </ul>	Not applicable	
☐ Site specific facility planning (Step 1) (Not eligible for supplemental application)	Not applicable	
Design (Step 2) ( <b>Not eligible for</b> supplemental application)	Not applicable	
Construction (Step 3)	Provide: The Ecology approval letter for the Facility Plan describing this project.  Provide: Documentation of complete Environmental Review. NEPA (w/FONSI) or SERP (w/ state concurrence). If ESA is the only outstanding element for SERP concurrence, submit ESA documentation consistent with Ecology's interim procedure for 2010.  Provide: The Ecology approval letter for Plans and Specifications for this project. Special for the supplemental application, Plans and Specifications can be submitted for approval through April 17, 2009	
☐ Design and construction (Step 4)	Provide: The Ecology approval letter for the Facility Plan describing this project.  Provide: Documentation of complete Environmental Review. NEPA (w/FONSI) or SERP (w/ state concurrence). If ESA is the only outstanding element for SERP concurrence, submit ESA documentation consistent with Ecology's interim procedure for 2010. (Must have Plans and Specifications completed by September 17, 2009)	
<ul><li>Design-Build and Design-Build-Operate (Not eligible for supplemental application)</li></ul>	Not applicable	
Do you have an Ecology permit for this project?  Yes No Provide permit number: If no, what is the permit status? Only SEPA permit required. For wastewater facilities, provide information on the effluent limits: BOD: mg/l TSS: mg/l		
For wastewater facilities, provide the following information:  Number of system-wide users: System design capacity (MGD): Number of effluent permit violations over the last twelve months: Maximum monthly flow over the last twelve months (MGD): Biological Oxygen Demand (BOD) (mg/l): Effluent discharge of Total Suspended Solids (TSS) (mg/l): Effluent discharge of Ammonia (mg/l): Effluent discharge of Total Nitrogen (mg/l): Effluent discharge of Phosphorus (mg/l): Effluent discharge of Fecal Coliform (CFU/100 ml):		

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HARDSHIP	
For domestic wastewater construction projects:	
Is financial hardship assistance requested?	☐ Yes ☐ No
If yes, a Financial Hardship Analysis Form must be included with http://www.ecy.wa.gov/programs/wq/funding/2010/FinancialHards	
For stormwater projects:	
Is financial hardship assistance requested?	Yes No
Seattle Public Utilities requests the maximum available amount of the "Additional Subsidization" provisions of the American Recove Mayor Greg Nickels to Director Jay Manning, we believe that Ecorequest such funding. The Utility plans to cut more than \$49 million declining rate revenues, and this project may not proceed in 2009 if forgiveness outlined in recent Ecology guidance. We believe the plook forward to working with Ecology as the federal funding convergence.	ery and Reinvestment Act of 2009. Per our March 11 letter from logy is authorized to provide 100 percent loan forgiveness and on from its Capital program in 2009-2011 to live within our f it is awarded a low-interest loan or even the 50% loan project has great merit as an example of Green Infrastructure and ersation develops.
For hardship criteria on stormwater projects refer to Ecology's fundattp://www.ecy.wa.gov/programs/wq/funding/2010/index.html	ding website at:

# Part 1 FY 2010 Supplemental Water Quality Financial Assistance Application

Check for consistency with costs provided in Part 2, Question 2.	Project Amount & Terms:
Total Project Cost This amount represents the full cost of the project.	\$1,747,638
Eligible Project Cost This amount represents that portion of the project cost that is eligible for Ecology grant or loan assistance.	\$1,546,524
Ecology Loan Request (Activity or Facility Projects)  This represents the amount Ecology will loan, up to 100 percent of the eligible project cost. Refer to Ecology's Web page for loan term and interest rates.	\$1,546,524 Term: years  Per our request on the prior page, we request the maximula available loan forgiveness for this project.
If applicable, check all types of Green Infrastructure involved in this project:  Green Infrastructure Energy Efficient Improvements Water Efficiency Improvements Environmentally Innovative Activities	Dollar amount of Loan Required dedicated to one or more type of Green Infrastructure implementation:  \$1,546,524
Other Funds in Project  Identify anticipated source(s) of federal and other funds: Federal agency none Other agency Seattle Public Utilities Other agency	Amount requested (or to be requested) from these agenci \$0 \$201,114 \$

If you are requesting financial hardship consideration, you must submit the financial hardship analysis form (<u>Hardship Form</u>) with this application. Ecology will determine your hardship eligibility and identify a project funding package that may include reduced interest rate and possibly additional subsidy in the form of forgivable principal or grant.

## 12. BRIEF PROJECT DESCRIPTION (to appear in the funding list): (50 words or less)

CSO basin retrofit using bioretention cells, a Green Stormwater Infrastructure technique. Bioretention will be placed along 10 street blocks to provide CSO reduction, reduce energy demand on King County's pumping system, and provide a regional data set on costs to more effectively incorporate this technique into other water quality projects.

## Part 1 FY 2010 Supplemental Water Quality Financial Assistance Application

13. APPLICATION CERTIFICATION:		
I CERTIFY TO THE BEST OF MY KNOWLEDGE THAT THE INFORMATION IN THIS APPLICATION IS TRUE AND CORRECT AND THAT I AM THE <b>LEGALLY AUTHORIZED SIGNATORY</b> OR DESIGNEE FOR THE SUBMITTAL OF THIS INFORMATION ON BEHALF OF THE APPLICANT.		
Ray Hoffman		
Printed Name	Signature	
Acting Director	March 12, 2009	
Title	Date	

#### 14. APPLICATION SUBMITTAL INFORMATION:

**Application Due Date:** March 13, 2009

Department of Ecology (Lacey headquarters office) must receive the following by 5:00pm on the Due Date (must be in our hands by this deadline):

- One original signed application
- Two copies of the signed original
- One electronic version of the application on CD ROM (in MS WORD format)

U.S. Postal Mailing Address:	Overnight Mail or Hand Delivery Address:
Department of Ecology	Department of Ecology
Water Quality Program	Water Quality Program
Financial Management Section	Financial Management Section
P.O. Box 47600	300 Desmond Drive
Olympia, WA 98504-7600	Lacey, WA 98503

(This concludes Part 1)

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An applicant resource guide is located at the beginning of this form.

## **EXECUTIVE SUMMARY (0 points)**

Summarize the overall water quality problem and how it will be solved or addressed by the project. (Limit your answer to 250 words or less.)

Stormwater and combined sewer overflows contribute to degraded water quality conditions in Puget Sound and adjacent freshwater lakes and rivers. Disproportionate amounts of pollutants such as metals, organic compounds, and fecal coliform, are coming from urban areas.

The goal of this project is to reduce combined sewer overflows and reduce pollutant loading from untreated sewage and stormwater to the Lake Washington Ship Canal.

The project will install 10 blocks of bioretention swales in the north Ballard neighborhood of Seattle. The swales will detain and infiltrate stormwater. This will reduce the discharge of stormwater to the combined sewer system and free up capacity in the system. In turn, this will reduce both the volume and number of combined system overflow (CSO) events.

This Green Streets project will control runoff from 2.6 acres of impervious drainage area, controlling 50,000 gallons, or approximately 14%, of the CSO volume. This will reduce pollutants reaching the Ship Canal, which serves as a key migration corridor for threatened Chinook salmon and steelhead, coho salmon, and regionally significant sockeye salmon.

## 1. SCOPE OF WORK (up to 250 points)

Points are awarded for a clear, complete, and well thought-out scope that directly addresses a water quality problem. The scope demonstrates an understanding of the work required to implement and complete the project. Resourceful approaches or solutions are encouraged.

- Provide a detailed scope of work to achieve the water quality benefits of the project that includes clearly defined tasks, deliverables, and costs per task.
- Describe the project area and provide a supporting map(s) and any relevant diagrams and pictures.

#### **Project Need:**

Puget Sound and many of its freshwater systems are affected by water pollution, with substantial contributions from stormwater discharges and combined sewer overflows (CSOs). Urban areas contribute a disproportionate amount of pollutants into local receiving water bodies. Municipalities throughout the region, and the country, are struggling to adapt aging stormwater drainage and combined sewer systems to reduce water pollution and adopt more sustainable approaches to meet that need.

Lake Union and the Ship Canal, located in Seattle, face seasonal low dissolved oxygen levels, high water temperatures, and elevated fecal coliform levels. There is also concern over the loading of metals and organic compounds from surrounding urban areas. Bottom sediment contamination from metals and organic compounds has been found in Lake Union and the Ship Canal. A 2007 CSO sediment characterization study

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conducted by Seattle Public Utilities examined results from sediment samples taken close to CSO discharge points. The study found that, of the 14 outfalls in the area with sediment samples taken within 250 feet of the CSO, 12 of the 14 locations had exceedances for metals, polycyclic aromatic hydrocarbons, phthalates, PCBs, and dibenzofuran. There is concern about pollutants affecting biota in the area. Lake Union is 303(d) listed as impaired because of elevated concentrations of pollutants found in fish tissue samples.

Lake Union and the Ship Canal contain 33 CSOs. CSOs are a remnant from early sewer system planning, when sewer systems conveyed both wastewater and stormwater. Separated wastewater and stormwater systems were installed starting in the 1950s, along with wastewater treatment systems. Today Seattle contains a mix of combined and separated systems. Under normal operation, all water entering the combined system is treated. However, when system capacity is exceeded, the combined system overflows directly to receiving water bodies (i.e., Lake Union and the Ship Canal) without treatment. These overflows carry both untreated sewage and storm water, and their associated pollutants (e.g., fecal coliform, metals, and organic compounds). Overflows create public health risks associated with contact recreation and consumption of contaminated seafood, as well as impacts to aquatic life.

To reduce water pollution, Seattle Public Utilities is working to reduce CSO events and address stormwater sources. Through recent CSO reduction planning, Green Stormwater Infrastructure (GSI) techniques were identified as cost effective tools to reduce CSOs. GSI approaches use soils and vegetation to detain, infiltrate, and evapotranspirate stormwater, thereby reducing the amounts of runoff that enter combined or separated drainage systems. Green infrastructure, such as bioretention swales, improves water quality by reducing the occurrence or volume of CSOs. By reducing stormwater runoff, capacity in combined systems is freed up to carry wastewater. This reduces CSO-related pollution from both untreated wastewater and stormwater.

GSI techniques also treat stormwater and reduce the pollutants it carries. They improve air quality through filtrating by plants, moderate the elevated air temperatures found in pavement-filled cities, reduce heating and cooling energy demands, and improve urban aesthetics and community livability. Overall, GSI can lower costs and environmental impacts from constructing, operating, and maintaining traditional wastewater and stormwater systems.

#### **Project Location:**

This project will retrofit 10 city blocks in North Ballard, Seattle, to incorporate green infrastructure. These blocks will be located between NW 85<sup>th</sup> Street, to the north, and NW 65<sup>th</sup> Street, to the south, bounded on the east and west by 23<sup>rd</sup> Ave NW and 32 Ave NW respectively.

This area is part of CSO Basin 152, which drains into the Ship Canal and ultimately to Puget Sound. The runoff volume for this basin is approximately 343,048 gallons. This project will control runoff from 2.6 acres of impervious drainage area, controlling 50,000 gallons, or approximately 14%, of the CSO volume.

#### **Project Tasks:**

#### **Task 1- Project Administration/Management:**

A. The RECIPIENT will administer and manage the project. Responsibilities will include, but not be limited to: maintenance of project records; submittal of payment vouchers, fiscal forms, and progress reports; compliance with applicable procurement and interlocal agreement requirements; attainment of all required permits, licenses, easements, or property rights necessary for the project; conducting, coordinating, and scheduling of all project activities; quality control; and submittal of required performance items.

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- B. The RECIPIENT will ensure that every effort is made to maintain effective communication with the RECIPIENT's designees, the DEPARTMENT, all affected local, state, or federal jurisdictions, and any interested individuals or groups. The RECIPIENT will carry out this project in accordance with completion dates outlined in this Agreement.
- C. The RECIPIENT shall submit all invoice requests and supportive documentation to the Financial Manager of the DEPARTMENT.

## **Required Performance:**

- 1. Effective administration and management of this grant project.
- 2. Maintenance of all project records.
- 3. Submittal of all required performance items, including the Post Project Assessment Plan, progress reports, financial vouchers, and maintenance of all project records.

Total Task Cost \$46,400

#### Task 2 – Complete Green Street Design:

The project team will complete project design, permitting and community coordination to implement the project. The project team will produce plan views with bioretention locations, standard details, and refined cost estimates. Seattle Public Utilities will also hold meetings with the community to address any final project concerns and coordinate with Seattle Department of Transportation on right-of-way needs. We anticipate a SEPA checklist with a Determination of Non-Significance, based on similar projects within Seattle. Reviews for compliance with Executive Order 05-05 (Archeological and Cultural Review) or SERP, if applicable, will be completed. A completed bid package will be prepared.

#### Timeline:

Design complete Sept 2009

#### Required Performance:

Project design.

Community coordination.

Environmental review.

Total Task Cost \$371,208

#### Task 3 - Install Green Streets:

Seattle Public Utilities will install bioretention cells along 10 city blocks in the public right of way, in North Ballard, Seattle (see attached map). These swales will improve retention and detention of stormwater runoff, reducing the volume of water delivered to the CSO system, and reducing the number of CSO overflow events in the Ship Canal.

Bioretention uses the physical, chemical, and biological processes in plants and soils to absorb and treat pollutants and help maintain the hydrologic balance of an area. The volume of runoff is also reduced by infiltration and retention in the soils and interception, uptake, and evapotranspiration by the plants. The bioretention cells will be designed to act as a flow control best management practice to control flow volume, frequency, and rate.

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Bioretention cells are designed to treat stormwater from small drainage areas that drain directly to them. Cells in the project area will be approximately 9% the size of their contributing drainage area. We will also encourage residents to participate by providing educational materials for other distributed stormwater controls residents can use on their property such as roof downspout disconnection to cisterns, permeable pavements, raingardens and areas of adjacent amended soils.

#### Timeline:

Green Streets installed Feb - Nov 2010

#### Required Performance:

Green streets installed to design specifications.

All permit conditions met.

Total Task Cost \$1,113,630

#### **Task 4:** Vegetation Establishment

Develop landscape consulting capacities, focusing on use of underserved community business. Contract 1-year plant establishment.

#### Timeline:

Plants established Nov 2011

## **Required Performance:**

Plants established to design criteria.

Total Task Cost \$100,000

#### **Task 5:** Modeling and Monitoring

This pilot project will be used to establish the efficacy of green streets to reduce CSO flows and overflows, thereby improving water quality in the receiving waters.

Post Project Evaluation will report the following:

- a. Modeled Average Annual volume of stormwater removed from the combined sanitary system.
  - Modeling of the project effectiveness will be conducted with a continuous rainfall simulation modeling program that has received approval for bioretention modeling per Ecology requirements.
  - SPU will report the Average Annual volume of stormwater removed from the combined sanitary system.

#### b. Flow control Test

SPU will evaluate the project to quantify the benefits of bioretention cells for reducing the flow volumes and peak rates contributing to CSOs, following the Portland monitoring methodology. SPU will conduct several controlled flow tests. Controlled flow testing provides a relatively inexpensive and accurate method to evaluate the performance of these facilities. Using a fire hydrant, hose and a portable water meter, almost any storm event can be simulated with regards to flow rates and volumes and reliable performance data can be compiled in a relatively short period

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of time.

c. Energy Demand Reduction.

SPU will work with King County to report energy savings achieved by removing of stormwater from the sanitary system, reducing the energy demand created by pumping the water to West Point and treatment of the stormwater at that facility.

#### Timeline:

Monitoring in 2011.

#### Required Performance:

Monitoring report showing efficacy of green infrastructure.

Total Task Cost \$70,000

#### **Task 6: Communication**

The data from this project will be shared with elected officials, Seattle Public Utilities managers and staff, and Seattle citizens. In doing so, lessons learned will be incorporated into decision-making by city planners and the City Council, as they will provide rationale for installing similar natural drainage systems around the city. Outreach and education efforts to citizens will provide information about distributed stormwater controls (also under Task 3) and communicate the results of the project. In addition, SPU staff will incorporate findings into the CSO Long Term Control Plan Update's alternative analysis, which will be underway in 2009 and 2010. SPU will also present findings at a minimum of 2 conferences and provide results to Puget Sound Partnership and Washington State University staff to inform updates to the Puget Sound LID Manual update.

#### Timeline

Annual reports to city planners and city council.

Annual study report.

Annual presentations at conferences.

#### **Required Performance:**

- 1. Study report annual
- 2. Report to city planners/city council annual
- 3. Regular communication with local groups
- 4. Present findings at 2 conferences.

Total Task Cost \$46,400

## 2. PROPOSED BUDGET (up to 150 points)

**Budget**: Points are awarded for a complete, reasonable budget that is consistent with the tasks described in the scope of work. Budget examples can be found in Appendix A of Administrative Requirements for Recipients of Ecology Grants and Loans "Yellow Book," found at:

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http://www.ecy.wa.gov/programs/wq/funding/2010/index.html

• Provide a clearly defined Task and Object Budget (as applicable).

#### TOTAL Eligible Costs by Task Elements TOTAL Eligible Costs by Task Elements

Proposed Project Budget and Time Frame					
Task elements	Total Project Cost	Total Eligible Cost	Months needed to complete		
1. Project administration/management	\$46,400	\$32,944	38		
2. Design Green Streets	\$371,208	\$263,558	7		
2. Install Green Streets	\$ 1,113,630	\$1,061,537	11		
4. Vegetation Establishment	\$100,000	\$100,000	12		
5. Modeling and Monitoring	\$70,000	\$55,521	12		
6. Communication	\$46,400	\$32,964	6		
6.	\$	\$			
7.	\$	\$			
8.	\$	\$			
9.	\$	\$			
10. (Include additional tasks as needed)	\$	\$			
Total costs and months needed to complete:	\$1,747,638	\$1,546,524			

## TOTAL Eligible Cost by Budget Object

Salaries: \$268,011Benefits: \$157,680Indirect costs: \$66,813 (May include up to 25 percent of employee salaries and benefits)
Contracts: \$1,048,020

Materials, goods, and

services (list major item): \$ Equipment (list major items): \$ 0

Travel: \$\frac{1}{5}\$ (0.00)
Other (please outline): \$\frac{1}{5}\$

**Total Eligible Cost:**  $\$ \overline{1,546,524}$ 

#### **Match Source**

List other funding sources and amounts, including local matching funds, volunteer in-kind, or interlocal contributions (25 percent = 0.25 multiplied by the total eligible project cost):

Funding Source: City of Seattle \$201,114
Funding Source: \$
Funding Source: \$
Funding Source: \$

Funding Source: \$
Funding Source: \$

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#### **Describe the status of matching funds:**

Funding has been secured from City of Seattle (Seattle Public Utilities Drainage and Wastewater Fund) in 2009 as part of the combined sewer overflow control program.

*Cost Estimate Process*: Points are awarded to cost-effective projects with accurate cost estimates. For example, an applicant may determine cost effectiveness and estimate accuracy based on experience with past or ongoing projects, through consultation with other entities that have related experience, or through a planning process such as value analysis.

- Describe how costs were estimated. Include the steps taken to ensure accuracy.
- Describe the process used to control cost and ensure that this is a cost-effective project (e.g., value engineering for facilities projects or cost analysis for activities projects).

Overall, Seattle Public Utilities uses a comprehensive planning process known as "Asset Management." This process—for which the city has received awards—allows city planners to include in their deliberations on infrastructure projects the environmental and social costs and benefits of a project, as well as direct financial costs and benefits. City managers must also consider the "life-cycle cost" of a project, including long term operation and maintenance costs and replacement costs.

SPU has initiated numerous efforts towards the development of reliable costs for our Green Stormwater Infrastructure (GSI) practices. Most significant efforts include:

- (1) Post project evaluation of project estimates versus bids, as well as review of estimated quantities compared to final quantities. The most recent post project evaluation was following our Pinehurst Natural Drainage System (NDS) project.
- (2) Compilation of national data and converting into uniform reporting matrix, including working with regional experts in Portland, Philadelphia, Chicago and DC. Final data documented into the Decentralized, "Low-Impact" CSO Control Options: Key Cost Parameters and Unit Cost Calculations. John Gibson 2008. Data compiled to provide a consistent document to evaluate the lifecycle cost comparison for our Asset Management reporting. Primary components of the report include construction costs, allied costs or soft costs, measured life of the improvements, replacement costs, operation and maintenance costs. Construction Costs include labor and materials, and other direct activities associated with actual construction, such as mobilization, traffic control, excavation and removal, and connections or reconnections to water sources and downstream connection points. Soft costs (or allied costs) include (but are not limited to) planning, design, permitting, contingencies, taxes, and close-out.

SPU used this data in our 2010 CSO reduction plan (an internal document) to establish where green infrastructure was likely to be more cost effective than traditional/grey infrastructure. Highlights of unit costs findings concluded in the 2010 CSO Plan Update are presented below in Table 5-10 and 5-11.

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TABLE 5-10.
ESTIMATED UNIT COSTS/SF OF IMPERVIOUS AREA
FOR GSI CSO CONTROL MEASURES

	Residential Roof drain Disconnect	Commercial Green Roof, Retrofit	Residenti al Cistern	ROW Bioretentio n Swale	Rain Garden ROW & Residential	Permeable Paving Alleys
Construction Cost per square foot of footprint (June 2008)	\$0.86	\$10.25	\$55.60	\$85.88	\$32.39	\$8.00
Allied Costs	35%	35%	35%	140%	110%	140%
Measure Life, years	100	40	20	50	50	28
Replacement per year	0%	5%	6.7%	5.25%	5.25%	5%
O&M, Early (1-3yrs) \$ per sq ft	\$0.00	\$2.15	\$3.54	\$1.36	\$1.36	\$0.05
O&M, Mature (>3yrs) \$ per sq ft	\$0.00	\$1.62	\$3.54	\$0.65	\$0.65	\$0.05

TABLE 5-11.
UNIT LIFE CYCLE COSTS PER IMPERVIOUS AREA MANAGED FOR GSI ALTERNATIVES

UNIT LIFE CTCLE	COSTS PER	INFERVIO	OS AREA IVIA	NAGED FOR	C GSI ALTER	MATIVES
	Residential Roof drain Disconnect	Commercia 1 Green Roof, Retrofit	Residential Cistern	ROW Bioretentio n Swale	Rain Garden ROW & Residential	Permeable Paving Alleys
Area ratio	100%	100%	2%	3.8%	8%	33%
Unit Cost per Square	Foot Managed					
Capital cost (June 2008)	\$1.15	\$53.81	\$1.50	\$7.83	\$5.44	\$6.39
100-year life cycle cost	\$1.16	\$54.97	\$4.16	\$11.25	\$8.85	\$9.09
Ancillary benefit %	2%	10%	5%	15%	10%	10%
100-year life cycle cost, triple bottom line	\$1.14	\$49.47	\$3.95	\$9.56	\$7.97	\$8.18

For this green street demonstration project a concept design was also used to evaluate costs. A schematic design was developed and associated quantities of construction bid items developed. Bid costs were estimated based on the Pinehurst NDS project experience.

The data from the above concept level engineers estimate was compared to the data from the CSO plan update; both sources resulted in similar cost estimates. Project costs presented were developed based on the concept level engineers estimate. Added costs were developed for project specific elements such as monitoring and communication tasks and included in the total project budget.

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## 3. WATER QUALITY AND PUBLIC HEALTH IMPROVEMENTS (up to 250 points)

Points are awarded for improvements and protection of water quality and public health. Substantial environmental improvements receive the most points. Measurable improvements receive more points than unclear or vague benefits. The actual benefit, the total impact (area impacted, number of people affected), level of implementation, and the severity of the problem will be considered. Only changes that can be achieved by the proposed scope of work will be considered.

- Define the water quality and/or public health problems the project will address.
- Describe the expected project results, including how the project will help achieve water quality and/or public health improvements and protection.
- Describe how much of the water quality problem will be addressed by the project.
- Describe how success of the project will be measured and documented.
- Describe how the water quality and/or public health improvements will be sustained for the long term.

<u>Water Quality Problem:</u> Combined sewer overflows (CSOs) occur when stormwater runoff overwhelms the local drainage system, and excess flows are diverted from the sewer system directly to receiving waters, carrying with them pollutants from stormwater runoff and untreated sewage. The CSO basin of this project is not scheduled to achieve CSO compliance via traditional infrastructure until 2016.

<u>Expected Project Results:</u> This project will control runoff from 2.6 acres of impervious drainage area, controlling 50,000 gallons, or approximately 14%, of the CSO volume. It will also provide rationale for the use of similar green infrastructure in other parts of the city, region and country.

Based on historical overflows at this basin from 2005 to 2007, this project would have reduced the average annual overflow frequency from the current 11 to 27 times per year to 4 to 20 times per year. On an average annual basis, this is equivalent to keeping approximately 45,400 to 64,600 gallons of combined sewer overflow out of the Ship Canal, the receiving water body for this CSO. The Ship Canal, and larger Lake Union system, contain a number of documented sediment contamination areas including some near CSO discharge locations.

<u>Measuring/Documenting Success:</u> Project reports will be completed and shared with other groups. A summary report will be submitted to the Seattle City Council. The modeling and monitoring data analysis will be written up and submitted to a professional journal, where it will be subjected to peer review. At least one conference presentation will be made per year of the grant.

<u>Long Term Sustainability:</u> Several recent initiatives at the City of Seattle underscore the city's commitment to long term sustainable development, including the Green Seattle Initiative, the Mayor's Restore Our Waters Strategy and the Science Framework for Ecological Health in Seattle's Streams. As it is currently not mandated in any federal, state or local program, this effectiveness monitoring highlights SPU's dedication to exceeding permit-mandated expectations (SPU Environmental Policy Objective 1). City residents, non-profits, and other private groups are actively involved in implementing these measures.

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## 4. STATE AND FEDERAL REQUIREMENTS (up to 100 points)

Points are awarded for projects that address state and federal requirements (e.g. Total Maximum Daily Load (TMDL), permit requirements, watershed plans, etc.). How will the project TMDL objectives will be considered. Straight to implementation proposals will be awarded points based on the link between the activity proposed and the ability to meet water quality standards.

- Describe how this project is specifically required by a state or federal agency. Provide reference or documentation including permit conditions, department orders, court orders, or other department correspondence.
- Explain how this project addresses specific actions in an Ecology-authored Water Quality Improvement Report or Water Quality Implementation Plan. Provide the document publication number and the last date of contact with the respective Ecology TMDL lead.
- Explain how this project addresses specific actions in a program or a plan, other than a TMDL, that is designed to meet water quality standards.
- 1. CSO Regulations: WAC 173-245 requires Seattle to reduce CSO volumes to the greatest CSO reduction at the earliest possible date. This project moves us closer to meeting the regulatory required average of 1 overflow per year in this basin. The project also allows SPU to reduce CSOs at an earlier date than otherwise planned. This basin was identified in Seattle's 2010 CSO reduction plan to be best controlled using a suite of green streets, green alleys and centralized detention pipes. This project moves forward one aspect of the basin controls as an early action.
- 2. *TMDL*: The project works toward addressing the TMDL actions set forth by DOE, EPA and the 2008 303-D list. The project targets the pollutants known or suspected to occur in CSOs.
- 3. Puget Sound Partnership (PSP) Initial Strategic Priorities for Puget Sound Prevent the sources of water pollution. (http://www.psp.wa.gov/aa\_priorities.php). This project addresses the need identified by PSP to retrofit existing developed areas with more effective stormwater control systems. More importantly, it addresses the pressing need for data showing which strategies "have a reasonable certainty of effectiveness; have a realistic expectation that they will be effective; utilize scientific input; are cost effective; and address the processes that form and sustain ecosystems rather than focusing narrowly on fixing individual sites."
- 2. Seattle's *Restore our Waters* (*ROW*) *Initiative*, is "a comprehensive strategy to restore, protect and enhance the water bodies of Seattle" that "requires City departments to invest smartly in projects that make the most improvement." It gives highest priority to reducing high impact creek flows, facilitating hydrologic improvements and channel capacity, and water quality issues that impact human and aquatic health. The Venema NDS is included as a high priority under this initiative. ROW also identifies the need for "additional investments in research ... to advance scientific understanding of the city's water resources. (Restore Our Waters Strategy, pg 5, http://www.seattle.gov/mayor/issues/row.htm)
- 3. The *City of Seattle Urban Blueprint* focuses city programs on providing services to citizens, including water quality, habitat for fish and wildlife, and aesthetics. This project will "provide a substantial improvement to the existing conditions that salmon find within the city of Seattle" and will "improve general neighborhood quality". (City of Seattle Urban Blueprint for Habitat Protection and Restoration, p116, Stormwater Capital Improvement Program.)
- 4. WRIA 8 Salmon Recovery Plan: Near Term Action Agenda, identifies stormwater as having a negative impact on salmon populations, by "transporting contaminants into river, stream, and nearshore systems, and by

## FY 2010 Water Quality Financial Assistance Application

altering natural hydrologic flows." The agenda calls for stormwater management programs that "more closely emulate natural hydrologic processes and protect water quality' and for "standards for ... management of stormwater runoff" (Chapter 5 Regulatory and Policy Recommendations, pg 5). The Agenda also identifies a need for project effectiveness monitoring (Chapter 7, Adaptive Management, Monitoring and Research, pg 5). This project fulfills those needs.

## 5. PROJECT TEAM (up to 50 points)

Points are awarded based on skills, qualifications, and experience of the established or potential project team members.

- Describe roles and responsibilities of each team member. Include the estimated amount of time each team member will devote to the project. (e.g. What percent of each team member's work week will be devoted to this project?)
- Describe the relevant skills and qualifications of each team member (*do not submit resumes*).

Project Specifier: Tracy Tackett, P.E., SPU Green Stormwater Infrastructure Program Manager. Tracy has over 9 years experience designing, constructing and managing programs and projects using GSI. She is responsible for the management, direction and decision making of Capital Improvement Projects and significant programs focused on reducing the effects of Seattle's urban stormwater runoff on our receiving water bodies using Green Infrastructure and other LID techniques. SPU's LID efforts include the Natural Drainage System Green Grids, which redevelop City street rights-of-ways with naturalistic design alternatives for achieving stormwater quantity and quality goals. In Tracy's former role in the Utility she was lead designer for the NDS projects, including design of the SEA Streets project, which has shown a 99% stormwater volume reduction.

<u>Design Team Lead: Masako Lo, P.E.</u>, SPU Engineering Division. Masako has over has over 9-year experience designing and constructing bioretention systems in Seattle's streets rights-of-way. In addition to being lead designer for Natural Drainage Systems such as Pinehurst Natural Drainage Systems, Masako has worked extensively with Seattle Dept. of Transportation to establish street design standards for bioretention in the street right-of-way.

<u>Design Team: Shanti Colwell, PE.</u>, Science and Technical Services Division. Shanti has over has over 6-year experience designing, modeling and constructing bioretention systems in Seattle's streets rights-of-way. Shanti is SPU's bioretention team technical lead. Shanti has implemented design of Natural Drainage Systems in the Broadview Green Grid, as well as leading development of standardized bioretention soil mixes and design and construction review criteria for bioretention projects designed and constructed for stormwater code compliance

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## 6. PROJECT DEVELOPMENT AND LOCAL SUPPORT (up to 100 points)

Points are awarded based on project development efforts and commitments from project partners. Provide documentation as appropriate.

- Describe the decision making process used to select this project.
- Describe any local, regional, or statewide partnerships that will substantially contribute to the success of the project.
- Describe the long term sustainability of this project's water quality improvement.
- For cities, towns and counties, indicate whether you are designated an "evergreen community" per RCW 35.105.030.

<u>Decision making process:</u> The City of Seattle uses "asset management" to determine the life-cycle cost and triple bottom line (economic, social and environmental costs and benefits) to guide its spending of scarce resources. Through this rigorous process, the city has determined that low impact development (LID) techniques are a promising approach for stormwater management. Scientific data on how LID benefits urban receiving waters are essential to inform this decision making effort. This project is an essential component of asset management, as it will provide both needed data and protocols for future data collection.

#### **Community**

Seattle Public Utilities will work with the residents in the Ballard neighborhood to successfully install the project.

<u>Long term sustainability:</u> Several recent initiatives at the City of Seattle underscore the city's commitment to long term sustainable development, including Restore our Waters, and the Green Seattle Initiative. City residents, non-profits, and other private groups are actively involved in implementing these measures.

The city has demonstrated its commitment to natural drainage systems and low impact development, with a number of projects: Street Edge Alternatives (SEA) Streets, Carkeek Cascade at 110<sup>th</sup> Street, Broadview Green Grid, High Point, and Pinehurst Green Grid. The city has also installed green roofs and requires new buildings to meet LEED requirements.

<u>Evergreen Communities:</u> Given its demonstrated commitment to protecting urban habitats, the city expects to be designated as an evergreen community, once that program is established.

## 7. READINESS TO PROCEED (up to 50 points)

Points are awarded based on how soon a project can begin.

- Describe the steps you have taken to proceed immediately with the project.
- Provide detailed information and documentation on project elements such as completed designs, permits,
   GMA compliance, interlocal agreements, landowner agreements, easements, other secured funding, staff, or agency approvals.

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Project basin and concept plan have been approved by the SPU division director responsible for CSO and stormwater projects. The project team members have allocated the necessary time to complete the project design by September 2009.

No GMA compliance, agreements, landowner agreements, easements, other secured funding are needed for the project. SEPA permitting will be required and we will initiate that process early this summer. The process should proceed rapidly, based on experience with similar installations in the city.

## 8. RATEPAYER IMPACT (50 points)

Points are awarded for wastewater treatment facilities construction projects that place financial hardship on sewer ratepayers. Applicants claiming financial hardship must fill out the financial hardship evaluation form and submit it with the application. Points will be assigned based on the outcome of the hardship calculations done at Ecology Headquarters as guided through rule.

Are you claiming financial hardship?

Seattle Public Utilities requests the maximum available amount of loan forgiveness for this project under Ecology guidance and the "Additional Subsidization" provisions of the American Recovery and Reinvestment Act of 2009. Per our March 11 letter from Mayor Greg Nickels to Director Jay Manning, we believe that Ecology is authorized to provide 100 percent loan forgiveness and request such funding. The Utility plans to cut more than \$49 million from its Capital program in 2009-2011 to live within our declining rate revenues, and this project may not proceed in 2009 if it is awarded a low-interest loan or even the 50% loan forgiveness outlined in recent Ecology guidance. We believe the project has great merit as an example of Green Infrastructure and look forward to working with Ecology as the federal funding conversation develops.

If yes, provide a financial hardship evaluation form at:

http://www.ecy.wa.gov/programs/wq/funding/2010/index.html .

## (Thank you! This concludes Part 2)

## Did you remember to:

Number the pages?
Verify that the budget in Part 2, Question 2 is consistent with Part 1, Question 11?
Include maps, diagrams, and/or pictures?
Include applicable letter(s)?
Include citations?
Include applicable forms, such as hardship analysis?
Send a signed original to Department of Ecology by 5:00pm, October 31, 2008 (consider using "Return Receipt Requested")?